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ABSTRACT

The life span and life events literature, in conjunction with the Aptitude/Treatment Interaction paradigm, is used to define developmental and contextual variables for program design and research efforts in the area of early childhood teacher education. The extended paradigm or framework, called Antecedent/Transaction Interaction (ATI), consists of three major components: antecedents, transactions, and outcomes. Following a brief description of each component, the antecedent's component is elaborated in terms of the resources and life events history adult learners bring to learning situations. A taxonomic scheme for categorizing life events history is provided and biological, psychological, and sociological resources of adult learners are characterized. To further specify antecedent variables, historical and concurrent events affecting the field of early childhood education are pointed out in terms of macro-, exo-, and microsystem environmental contexts. In the concluding section, questions related to applying the ATI framework to inservice and continuing education programs are specified. (While the title includes the term 'preschool teacher', content focuses on the education of all adults who have continued contact with children in early childhood education programs.) (Author/RH)

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The Preschool Teacher as an Adult Learner

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"Psychology is a science, teaching is an art, and sciences never generate arts directly out of themselves. An intermediary inventive mind must make the application, by use of its originality."

William James, 1899

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Preface

The following paper is part of an analysis that forms the foundation for a research program that, on the one hand, is just beginning but, on the other, represents years of effort. It derives from the multiple, simultaneous needs to (a) design adequate inservice and continuing education programs for currently employed early childhood personnel, (b) find appropriate evaluation strategies for those programs, and (c) validate current and developing credentialing and certification procedures.

The Preschool Teacher as an Adult Learner

INTRODUCTION

The title of this symposium and its organization imply a commitment to a contextual and developmental perspective toward teacher education. The perspective is contextual because it implies that there are significant and educationally important differences in the form and content of preservice and inservice educational programs depending upon whether the learner is, or is to be, employed in an early childhood program, an elementary school, a secondary school, or a university setting. It is developmental because it focuses attention on the fact that the participants of such programs are "adult" learners--implying continued development in later portions of the life span.

The early childhood field has paid appropriate lip service to the notions that effective training and education should be based on knowledge of adult development and that early childhood personnel[1] have a wide range of individual backgrounds, needs, and abilities (Almy, 1975; Combs, 1971; Peters & Dorman, 1974). However, in the development of inservice and continuing education programs, the field has been slow to go beyond the acknowledgement step. Few attempts have been made to integrate the findings of the adult development literature with the literature on early childhood personnel preparation or to adapt training or education programs to the individual differences in learners. Little that can legitimately be called theorizing has been done. In essence, the early childhood "context," the "adult learner," and the individual differences parts of the equation have not been defined (McNergney, 1980).

In this paper we make some preliminary suggestions about how these definitional issues may be resolved through the application of a life span perspective to the design of early childhood personnel

preparation programs. To do so, we first present an overview of the Antecedent/Transaction Interaction framework within which we are working. We then elaborate on one aspect of that framework: the definition of antecedents. Finally, we apply this notion of antecedents to the early childhood field as a means of coming to grips with what is meant by "the preschool teacher as adult learner."

THE ANTECEDENT/TRANSACTION INTERACTION FRAMEWORK

Background

The general framework adopted in this paper and in the line of research we are pursuing is called Antecedent/Transaction Interaction. It represents the combination of two paradigms. First, it utilizes the life span developmental paradigm (Baltes, 1973; Baltes & Schaie, 1973; Baltes & Willis, 1977), particularly as it has been applied to the life events literature by Hultsch and Plemons (1979), as a means of defining personal and distal antecedents that are likely to interact with both global and specific educational personnel preparation program variables. At the same time, it accepts the Aptitude/Treatment Interaction paradigm (Berliner & Cahen, 1973; Cronbach, 1957, 1975; Cronbach & Snow, 1977) as a means for clustering trainees on critical variables and "matching" these with an instructional program to achieve most effectively a normative set of outcomes. Stated another way, the life span, life events literature is used to define developmental and contextual individual difference variables that serve as aptitudes in an Aptitude/Treatment Interaction paradigm for program design and research.

The two paradigms are viewed as compatible and complementary. Both fall within what has been called the "mechanistic" metamodel (Hultsch & Plemons, 1979; Reese & Overton, 1970). That is, each

emphasizes antecedent-consequence relations as explanations for behavior change and recognizes that particular responses are the result of interactions between specifiable stimuli and individual organismic variables. However the life span developmental view extends the ATI paradigm by:

1. viewing individual abilities, traits, or talents from a developmental perspective rather than from the narrower psychometric view of differential psychology. As such the focus is on changes in rather than the stability of individual characteristics. That is, the focus is on inter-individual differences in intra-individual change.

2. recognizing the importance of conceptualizing and describing changing environmental contexts as they impinge on individual development, including the environmental contexts in which education and training take place; and

3. recognizing the fact that individuals in the early childhood field experience (at least) two concurrent developmental patterns--that of a person and that of a professional.

Components

The three major components of the Antecedent/Transaction Interaction framework are the antecedents, the transactions, and the outcomes. The antecedents refers to the definition of who is to be trained or educated--i.e., who is the adult learner. Transactions refers to the where, when, what, and how of the educational program--i.e., the curriculum content, the structure, and the methods of the educational program. The outcomes refers to the desired goals of the educational venture or its actual results. Each,briefly, will be discussed in turn.

Antecedents

There are two broad classes of antecedent variables suggested by a life span perspective. An individual entering an educational program brings both individual resources or attributes and a life events history (Hultsch & Plemons, 1979). Resources include various (a) biological factors such as general health or physical impairments, (b) psychological factors such as cognitive abilities, accumulated knowledge, attitudes toward the self and one's ability to deal with the environment, time perspectives, and general personality traits, and (c) sociological factors or personal support systems such as supportive frameworks of interpersonal relationships, socioeconomic status, or income level. The individual's life events history is considered to be the cumulative result of prior life events. In the broadest sense, an event is a noteworthy occurrence (Hultsch & Plemons, 1979). For practical purposes, the "event" must have impinged on the person in some way, either directly or indirectly. That is, there must be some relationship between the event and behavior change in the individual.

It is argued here that if program planners wish to design appropriate programs for early childhood personnel as adult learners, it is essential to know the entering student's resources and life events history. Yet, there is little in the literature that provides a systematic method for doing so. It is this portion of the Antecedent/Transaction framework that this paper addresses in greater detail.

Transactions

As indicated previously, transactions refers to the where, when, what, and how of the educational program. Broadly speaking, this includes the structure, content, and methods of the educational program.

Transaction variables may be considered at two levels--global and the specific.

The first author has suggested elsewhere several schemes for globally classifying early childhood personnel preparation efforts by content and delivery strategy (Peters, 1979, 1981; Peters & Kostelnik, 1981). The dimensions involved include such things as preservice versus inservice programming, theory versus practice orientation, non-degree versus degree programs, education versus skill training, and a variety of types of sponsorship. Others have suggested alternative classifications (Carrier, 1980). Although such dimensions seem extraordinarily broad, remarkably little data is available as to their appropriateness or effects (Peters & Kostelnik, 1981). On the whole, early childhood personnel preparation programs are poorly documented, few have been replicated, and their generalizability is, for the most part, untested.

At the more specific level, early childhood personnel preparation program planners have available to them a wide range of teaching strategies including lecture, discussion, films, videotapes, microteaching, direct observation, role playing, simulation games, and the like. The relative efficacy of such methods has been discussed elsewhere and will not be repeated here (cf. Almy, 1975, pp. 203-212; Peck & Tucker, 1973). Seemingly more useful for present purposes are three characteristics of the methods employed:

1. the degree to which the content of the instruction is generated or endorsed by the adult learner,

2. the degree to which the learning environment corresponds to application or to the subsequent work environment, and

3. the degree of independence provided to the learner.

The first two may be construed as validity issues (face and content validity) and affect what has been called the perceived relevance and perceived relative advantage of the training or education (Peters & Kostelnik, 1981; Rothman, 1974). That is, the student is concerned with the notion that what is learned will contribute to effectiveness on the job and/or personally and will provide benefits personally or professionally over and above those that would be available without such learning. The third characteristic, the degree of independence, refers to the learning of self-learning skills that may be used to continue learning after formal instruction is completed. All three are likely to be dependent, in part, upon the resources and the life events history the student brings to the learning situation.

Outcomes

The outcomes of the educational program are observable indications of behavior change. They can be defined in terms of performance competencies within the work setting or in more general human development terms, or both. We have chosen to focus on a set of variables that reflect a teacher's (a) willingness to implement innovations and training suggestions, (b) ability to flexibly employ a broad repertoire of teaching skills and strategies to meet individual learner needs--i.e., flexibility, and (c) ability to develop and maintain a coherent and consistent view of development and learning.

Additionally, consistent with the suggestions of Sprinthall and others (Peters & Busch, 1977; Sprinthall & Sprinthall, 1980), we have considered the psychological resources of the adult learner as both antecedents and as outcomes or dependent variables. As such, changes

in the individual's cognitive abilities, accumulated knowledge, self-concept, and locus of control become desired outcomes of training.

ANTECEDENTS

Given this brief overview of the conceptual framework, we turn now to our principal purpose of elaborating the antecedents or the resources and life events history the adult learners bring to the learning situation. For reasons that will become evident, it is desirable to begin with a discussion of life events history.

Life Events History

Table 1 provides a taxonomic means for categorizing life events history in a manner that seems most useful for the current discussion. The scheme incorporates the notions of immediacy in time and space (from distal to proximal) and directness of impact (from indirect to direct) along the diagonal from upper left to lower right. The taxonomy incorporates three levels of ecological context (macrosystem, exosystem, microsystem), two levels of temporal context (historical and concurrent), and two streams of development (personal and professional). The system is designed to highlight the necessity of viewing the activities of early childhood personnel preparation within the larger time-bound context of which it is but a part while at the same time recognizing the distinctive characteristics of the separate components.

Definitions

Macrosystem events. Macrosystem events are events that affect large numbers of individuals and are not part of the usual life course. Such events (e.g., wars, natural catastrophes, marked social or political changes, economic depressions) are major social events

TABLE 1: Categories of Historical Antecedents

Ecological Context		Personal Developmental Stream		Professional Developmental Stream	
		Temporal Context		Temporal Context	
		Historical	Concurrent	Historical	Concurrent
	Cultural	Personal Historical/Cultural Event	Personal Concurrent/Cultural Event	Professional Historical/Cultural Event	Professional Concurrent/Cultural Event
	Institutional	Personal Historical/Institutional Event	Personal Concurrent/Institutional Event	Professional Historical/Institutional Event	Professional Concurrent/Institutional Event
	Individual	Personal Historical/Individual Event	Personal Concurrent/Individual Event	Professional Historical/Individual Event	Professional Concurrent/Individual Event

that bring overarching changes in institutional patterns of culture and society. They not only have immediate effects on the individuals present but also continue to exert their influence through their relation to historical change in the culture. Thus, events of this type play a primary role in determining the cultural context of a particular birth cohort or contemporaneous professional colleague groups.

Exosystem events. Exosystem events are events that affect numbers of individuals within particular institutions of society but are not part of the usual life course of individuals. They are reflected in changes in the institution itself (such as major innovations, drastic changes in funding, etc. for the educational system), affecting the individuals involved both immediately and, through their relation to historical change in the institutions of education, subsequently.

Microsystem events. Microsystem events are defined as events which are experienced as a part of the usual life course or professional developmental sequence. Such events, while they give shape to the life cycle and career pattern of the individual, are not strictly age graded or time bound. The occurrence of some of these events is based, in part, on biological capacity, societal and institutional norms. Their effect is primarily individual.

Within the current framework, the above ecological context level events are distinguished by their time dimension as well.

Historical events. Historical events represent the distal antecedents of current behavior. At the macro or exosystem levels, to be relevant, they must impact upon the personal or professional development of the individual by affecting changes in (a) the availability of

resources, (b) availability of career or life style options, or (c) the cohort size and composition.

Concurrent events. Concurrent events are those that are proximal in time.

A key assumption of the life events literature is that in order for events to continue to affect developmental phenomena they must be linked in some way to the individual's own developmental course (Elder, 1973; Hultsch & Plemons, 1979). That is, they must impact, in some way, upon the individual's microsystem or proximal interpersonal environment. The two interpersonal environmental contexts of concern here are the family and the occupation or career context. The developmental streams of concern are the personal and professional developmental streams. Although, for any individual, the two are interactive, here personal events are construed as relating to the personal developmental stream and professional events are construed as relating to the professional developmental stream.

Personal events. Personal events are defined as the normative and nonnormative life events experienced by the individual as a person within the family context. Examples include such things as marriage, birth of a child, divorce, death of a family member, and so forth.

Professional events. Professional events are defined as the normative and nonnormative events experienced by individuals in their roles within the work setting--in this case as an early childhood educator.

Meaning of Life Events

It should be noted that crucially important to a life span developmental perspective on life events are timing and sequencing. From

this perspective, when an event occurs is perhaps as important as whether it occurs at all. That is, many life events are defined by normative factors. Though the norms may differ for different subgroups, they represent expectations about appropriate times for certain personal and professional life events (Neugarten & Datan, 1973). Individuals are made aware of whether they are early, on time, or late with respect to these norms through an informal system of positive and negative sanctions. Further, it is important to note that the timing and sequencing of events may differ within the two developmental streams of concern. That is, one may be early, on time, or late within the personal stream independently of where one is in the professional stream.

It should be noted also that the concept of life events, whether personal or professional, derives from the literature on stress and adaptation to stress. That is, any event that requires changes from customary behavior, i.e., that requires adaptation, is viewed as stressful. There is no inherent reason for viewing such events as positive or negative since all can lead to development. The valuing of life events for an individual can only be determined after considering the resources the individual has to cope with or adapt to the event.

Resources

As indicated previously, the resources the individual brings to the adult learning situation (which may be both a personal and professional life event) may be viewed as falling into three categories: biological, psychological, or sociological. These serve as mediators of prior life events and of the current educational experience. Further, in combination, they may be construed as weighing against each other to determine the individual's current state of functioning.

Definitions

Biological factors. Biological resources include such things as reasonably good health and stamina, adequate functioning of the sensory organs, reasonable dexterity and mobility, and the like. Such resources are usually construed as forming a base line for teaching (and may need to be certified by medical authority before licensure or credentialing). Only when marked deficiencies are observed do they enter into the equation. That is, they are only of concern when they predict general inability to adapt or an impairment in the ability of the individual to participate in the program (Lieberman, 1975). Other biological factors representing threshold sensitivities or temperaments may be of importance but have been so little studied that it is impossible to say.

Psychological factors. Several types of psychological variables seem particularly relevant to early childhood personnel preparation.

General cognitive abilities. Similar to biological variables, certain cognitive abilities may create minimum prerequisites for some types of education and training programs.

Accumulated knowledge and skills. Included here are both prior learning of content directly relevant to the educational program and more general problem-solving and literacy skills.

Educational values and beliefs. Values and beliefs provide the individual with a framework for organizing the course of his or her life and work. As such, they have been considered important both in the general functioning of the individual and in his or her professional education (Cohen, Peters, & Willis, 1976; McKibben & Joyce, 1980; Seaver & Cartwright, 1977).

Personality characteristics. There are a number of personality characteristics that may interact with personal event histories and educational program transaction variables. Several that seem suggestive are the person's self-esteem, openness to new ideas, feelings of control, and personal adjustment. Each has a supporting body of empirical literature and has appeared in listings of desirable characteristics for teachers.

Sociological factors. Whereas the biological and psychological factors previously discussed represent internal individual resources, sociological factors represent external individual resources. For example, supportive social networks may serve as resources for the individual in maintaining self-esteem or personal adjustment, or they may assist in overcoming the debilitating effects of physical illness. Poverty may limit access to self-improvement opportunities or reduce freedom to manipulate the environment for one's own benefit.

A Developmental Conception

Throughout this discussion, it should be remembered that a developmental conception is intended. That is, resources are not construed as static phenomena. At point of entry into an educational program, each individual brings a set of resources (assets and deficits) which are subject to change or intervention and which interact with each other. The particular importance of one factor or another in relation to the others may change with time and as a function of participation in the educational event. Further, the importance of these resource factors is always the result of interactions with the life event history of the individual.

Summary

Two types of antecedents are important for defining what is meant by the "adult learner": those that represent the resources the individual brings to the learning situation and those that distinguish the individual's personal and professional life events history. Individual resources include biological, psychological, and contextual factors. Life events are those noteworthy occurrences that impinge on the individual's personal and professional development, forming unique patterns of timing and sequencing.

HISTORICAL AND CONCURRENT VIEW OF EARLY CHILDHOOD EDUCATION

Given the Antecedent/Transaction Interaction framework, we turn now to the historical and concurrent events affecting the early childhood education field as a means for defining relevant antecedent variables. We do so by looking at changes in the macrosystem, exosystem, and microsystem environmental contexts.

Macrosystem

As one looks around the world and back in time, it is apparent that the education of young children has varied both in form and content. By form is meant the universality, orientation, and nature of the delivery system. By content is meant that which is delivered: the specific services provided, the goals and objectives for children, the curriculum, and so forth. To a great degree, the commonalities, as well as the cross-national and historical differences, in the form and content of early education are a relatively direct reflection of macrosystem variations in the economic, social, and political subsystems involved and the current state of technology (Peters, 1980;

Robinson, Robinson, Darling, & Holm, 1979). The form and content of education are products, in some global sense, of where a nation has been and where it aspires to go (Peters & Klein, 1981).

Rather rapid historical changes have occurred at the macrosystem level since the early 1960s, each with an impact on early childhood educators. The changes have involved both demographic changes in the nature of the American family (e.g., increases in maternal employment, a diminution of family size, the geographical scattering of the extended family, a rising divorce rate, and an increase in the number of unwed mothers--particularly among teenagers) (Keniston, 1977; National Research Council, 1976) and changes in conceptions of how government should meet the needs of individuals and families. The nature of the impact of these changes has been reviewed elsewhere (Peters, 1977, 1980) and won't be repeated here. However, demographic, economic, and political projections are suggestive of further macrosystem changes that can be anticipated in the near future that will constitute important concurrent life events for early childhood personnel.

Trying to understand the distal consequences of such changes as, or before, they occur assists in defining the "ultimate goals" of programmatic developmental models (Montada & Filipp, 1976; Riegel, 1973), including those for early childhood personnel preparation. Here are a few examples:

- There will be a substantial quantitative increase in the number of young children in the U.S. This is principally due to what might be called the secondary effects of the baby-boom era (1946-1964) as that cohort becomes parents. It is estimated that the

number of 0- to 5-year-olds in the population will increase from a low of 17.1 million in 1977 to a high of approximately 23.3 million in 1990 (Hofferth, 1979).

- Estimates vary somewhat, but it appears that somewhere between half and three-fourths of these new mothers will enter into or return to the labor force before their offspring reach their sixth birthday, producing a child care need for between 10.5 and 15 million young children (Hofferth, 1979; Urban Institute, 1980).

- Changes in the nature of the American family (e.g., single-parent households, decreasing numbers of adults per household, increased geographical dispersion of the extended family, etc.) will require that much of this new child care need will have to be met outside the home by other than a relative (Hofferth, 1979; Kamerman & Kahn, 1977; Keniston, 1977).

- At the same time, enrollment in some form of early childhood program, even for the children of intact, traditional families where the mother is not employed, is reaching near universality in the United States (Peters & Klein, 1981). Today, approximately 50% of all 3- to 5-year-olds are enrolled in nursery school, Head Start or day care programs (Hofferth, 1979). Kindergarten programs reach nearly all 5- and 6-year-olds. Rapid expansion continues in the day care system--including both commercial/proprietary day care (Lake, 1980) and federally and state-funded day care centers and homes (Hofferth, 1979; Peters & Koppel, 1977)--in home-based programming (Dudzinski & Peters, 1977), and in both special and "mainstreamed" programs for handicapped preschool children (Neisworth, Willoughby-Herb, Bagnato,

Cartwright, & Laub, 1980). Expansion is most notable in the area of programs for infants (Elardo & Pagan, 1976; Fowler, 1980). Early childhood program is likely to reach 100% of children under the age of six in the next decade.

- Research evidence indicates that day care as a supplemental childrearing approach has at least a benign effect on children and families and may serve as a beneficial environment for at least some children (Belsky & Steinberg, 1978; Belsky, Steinberg, & Walker, 1981; Peters & Belsky, 1981), and such findings are beginning to reach the lay public.

- There is mounting evidence that quality early childhood intervention programming, such as that provided by project Head Start, makes an enduring difference in the lives of children and in their academic achievement (HISCOPE, 1977; Palmer & Anderson, 1979), and this information is reaching at least some elected officials.

- That one of the most important determinants of quality early childhood care and education is the quality of staff of the program has been acknowledged by most professionals (Grotberg, Chapman, & Lazar, 1971; Peters & Kostelnik, 1981; Ruopp, Travers, Glantz, & Coelen, 1979).

- The cost of quality child care and education programming is high. In 1974, the average annual cost including federal and state outlays was $1,177 per child (Kamerman & Kahn, 1976). Current outlays (1980) have doubled that amount. Projections would indicate that with inflation the costs would double again by 1990.

- Revisions in the Federal Interagency Day Care Requirements

(1967) and the movement of many states to reduce or eliminate licensing standards for day care homes have been based primarily on the economic infeasibility of tightened restrictions on staff/child ratios and staff educational qualifications. The trend toward deregulation is likely to continue.

- In addition to direct subsidies for day care and early education programs (primarily under Title XX, Head Start, and BEH programs), in 1979 the federal government spent $792 million on indirect subsidies through income tax credits (National Campaign for Child Day Care for Working Families, 1981). This figure will increase rapidly with the increase in number of children in care and with revisions of the tax structure that just have been passed (National Campaign for Child Day Care for Working Families, 1981).

- There is major question whether the federal or state governments can continue to maintain and/or increase their economic involvement in the provision of early childhood programs--at least given current priorities.

In sum, recent historical changes and demographic projections, as well as current research, would argue that a major social and cultural change in early childhood education is under way--one that will affect both workers in the field and parents. More people will be needed for the early childhood work force and more competent and qualified people will be needed at all levels. However, the economic (and political) realities indicate that factors that would directly increase the costs of child care are unlikely to be implemented.

The conclusion one can draw from these facts and projections is that more early childhood personnel will be needed over the next decade, but, since formal education, degrees, or certificates have not

been found to be related to child outcomes (Ruopp et al., 1979) and since budgets will be tight, much of the education and training required will be in the form of inservice training and continuing education.

Also apparent in the projections for the future, and resting heavily on the historic evolution of the early childhood field in the United States, is the fact that the early childhood education system is developing and solidifying as a "dual" system (Peters & Belsky, 1981), with one set of services for the poor (Head Start and federally subsidied day care) and one for the more affluent (private day care, nursery schools, and enrichment programs). These two parts of the system are not only serving a different clientele based on different revenue sources and regulated by different agencies, they are being staffed differentially as well (Berk & Berson, 1981). For example, of the 35,200 Head Start teachers and assistant teachers employed nationwide, only 13.3% have an early childhood-related degree. A similar situation is found for the rapidly expanding national day care network. Meanwhile, programs for the more affluent segments of society are far more likely to be staffed by personnel with traditional forms of certification and academic credentials (Berk & Berson, 1981). Some of the implications of this division are elaborated below.

Exosystem

The exosystem includes more of the environment that the individual experiences directly. Within this system are the geographic region, the neighborhood, the agency or school setting that constitutes the broad work environment, the mass media, agencies of government, transportation systems, and the like. The exosystem provides the intermediate embedding environment within which the

individual, in this case the early childhood educator, develops both as a person and as a professional. It includes the within cohort time span that the person experiences both as an individual and as a worker in the early childhood field.

The exosystem affects the individual in both direct and indirect ways. Directly the exosystem establishes both tangible and intangible reward systems, sets constraints on behavior as through legislative or regulatory decrees that specify roles and responsibilities (Peters & Kostelnik, 1981), and provides the resources and opportunities for action. Indirectly the exosystem sets expectations for behavior, provides a climate of attitudes, beliefs, and values against which actions are judged, and determines local standards for normative and nonnormative life events. It is the external frame of reference for the individual.

Three related aspects of the exosystem as it pertains to the early childhood education field are most relevant here.

Bifurcated Referent Groups

First, it seems appropriate to identify the cohort, peer, or referent group within early childhood and the changes that are occurring within that group over time. As indicated above, within the "dual" early childhood system, there are really two groups of people involved. The first involves personnel working in Head Start programs, day care centers, and family day care homes as caregivers, group supervisors, or teachers. The majority of these people are women in their early to mid thirties, who have had little or no college preparation. They frequently derive from low-SES backgrounds and have limited monetary resources, but they frequently have had experience raising their own

children (Berk & Berson, 1981; Cohen, Sonnenschein, & Peters, 1973; Peters, 1972; Peters & Kostelnik, 1981). Within Head Start 22% of staff members are parents of current or former Head Start children (Calhoun & Collins, 1981). Many of these people entered the early childhood field as "indigenous nonprofessionals" as part of a hiring process that reflected the dual role of Head Start and Title IV-A day care as cycle of poverty-breaking programs for children and employment opportunity programs for low-income community residents (Trickett, 1979). Since these workers had no preservice training or education, a career development program was instituted that was to provide both vertical job mobility (from low-paying less sophisticated positions to higher paying more sophisticated jobs) and horizontal job mobility (the capability of moving from one setting to another or between program components) (OEO Instruction 6902-1). As part of the career development program, a structure for inservice training was established and funded. This program has been only peripherically related to the usual academic education and credentialing system.

Persons entering the early childhood field in this way have been slow to view themselves as professionals, though some movement in this direction has been noted (VanderVen, 1979a). When such persons engage in continuing education programs associated with institutions of higher education, they frequently are referred to as "nontraditional" students. This large group of people employed in the early childhood field is in marked contrast with the traditional students entering the higher education stream directly from high school, who pursue a career in early education by obtaining a Bachelor's degree and teacher certification. Those graduating from four-year programs are younger, less

likely to derive from poverty-level backgrounds, and have had limited life experience. They are more likely to view themselves as "teachers" and "professionals" in the traditional sense of those terms (Clark & Marker, 1975).

Because of their different backgrounds and routes into the early childhood area, the two groups have very different personal and professional life event histories. It might be noted that the potential for conflict and tension between the groups as they compete for jobs is real (Berk & Berson, 1981; Trickett, 1979).

In terms of professional event histories, both groups have been faced with institutional policies and public attitudes that have been debilitating. The prestige of the early education and child care field is low (as a job, rated below zoo-keeper and kennel-man in the U.S. Directory of Employment), and training for the field has been a low-prestige and low-investment venture in almost all institutions of higher education (Clark & Marker, 1975; Fuller & Bown, 1975). The field has been hard pressed to overcome the notions that the primary reward for working in the field should be the intrinsic satisfaction of being with children rather than an adequate wage and that working with children requires no special talent, skills, or training (Austin, 1981). Further, there are prevalent fears that somehow early childhood programs are damaging to families and are sexist (Caldwell, 1981). These often implied but less often voiced attitudes are felt by workers in the field and, no doubt, indirectly influence their behavior.

The Child Development Associate Program

To meet its commitment to the career development concept in Head Start, while also addressing the increased demand for more workers in day care, the Office of Child Development (now Administration on Children, Youth, and Families) in 1972 established the Child Development Associate Program. This program was conceived as a new approach in which a nationally recognized credential would be awarded to those who could demonstrate competence in the day-to-day care of young children. The program specifically and intentionally separated training and the assessment of competence.

Details of CDA training and of the national credentialing system are available elsewhere (cf. Peters, 1981b; Trickett, 1979). What is important to note is that since its inception over 6,000 individuals have received their credential, and the number is expected to more than double in the next three years. The credential has been judged in 17 states as meeting the requirements for some position level in child care and usually is considered the equivalent of at least an associate degree. About half of the people credentialed have worked in Head Start programs, the remainder in day care or other early childhood programs.

The CDA competencies and the credential system are now undergoing revision and expansion. Specialized versions of the CDA credential will soon be available to family day care providers, home visitors, and persons working with infants or in mainstreamed early childhood settings. Training efforts are being expanded as well, often with closer linkages to colleges and universities, thereby enhancing the "academic" credibility of the CDA process. Both expansions are

likely to increase markedly the number of CDA-credentialed early childhood personnel by the end of the decade, most of whom will work in the public sector.

Early Childhood Program Autonomy

The third characteristic of the exosystem is of quite a different type, though it is related, as with any aspects of an interactive system, to the two previously mentioned. Early childhood education settings have traditionally operated rather autonomously. They have been generally outside the mainstream of public education and have fought to remain so (Caldwell, 1981). Both the states and federal governments have refrained from trying to regulate program content or curricula (FIDCR Appropriateness Report, 1978; Hollick, Peters, & Kirchner, 1972). Curricula based on a range of developmental theories and educational philosophers, as well as many ecclectic versions, exist (Evans, 1975); decision on their selection or rejection usually is left up to individual teachers or program directors. Within most programs the staff design and implement their own ideas. Indeed, federal programs have encouraged or mandated local options and choices and have stressed individualization of programming. Since most programs are relatively small in size ($\lesssim$100 children) and since most programs are not formally linked to other similar programs, most overall planning and all individual daily planning are carried out at the classroom level.

The latitude or freedom within the early childhood field greatly exceeds that experienced by most public school teachers. Thus, diversity is the hallmark of the early childhood field. Yet, this carries with it major expectations that early childhood personnel will be able to plan and carry out their program, select their teaching

methods, and organize activities in a flexible, independent, and autonomous way. Recent changes in the political system have created further changes in the exosystem which make this task even more difficult. P.L. 94-142 and the mandated inclusion of handicapped children in Head Start programs further complicate the planning process and place greater demands on classroom personnel for knowledge and skills they may not have.

It is this dimension of the exosystem that distinguishes the early childhood context from others represented in this symposium. In some ways, the dimension of professional autonomy is a "U" shaped curve (See Figure 1). With professional autonomy highest at the low and high ends of the educational span and most reduced in the middle areas.

Summary

In sum, the characteristics of the exosystem influence the early childhood educator in both direct and indirect fashion. The cohort group is diverse and divided, yet all are faced with an environment that lacks social and tangible reinforcement for the work done. Training and credentialing programs are expanding but may serve only to further divide the field and make the definition of the early childhood professional more difficult. At the same time, traditional demands for independence and autonomy persist, and the knowledge and skills necessary to meet those demands are increasing.

Microsystem

The microsystem represents the most immediate environment in which early childhood personnel are participating members. The microsystem of each early childhood educator is highly idiosyncratic, and its

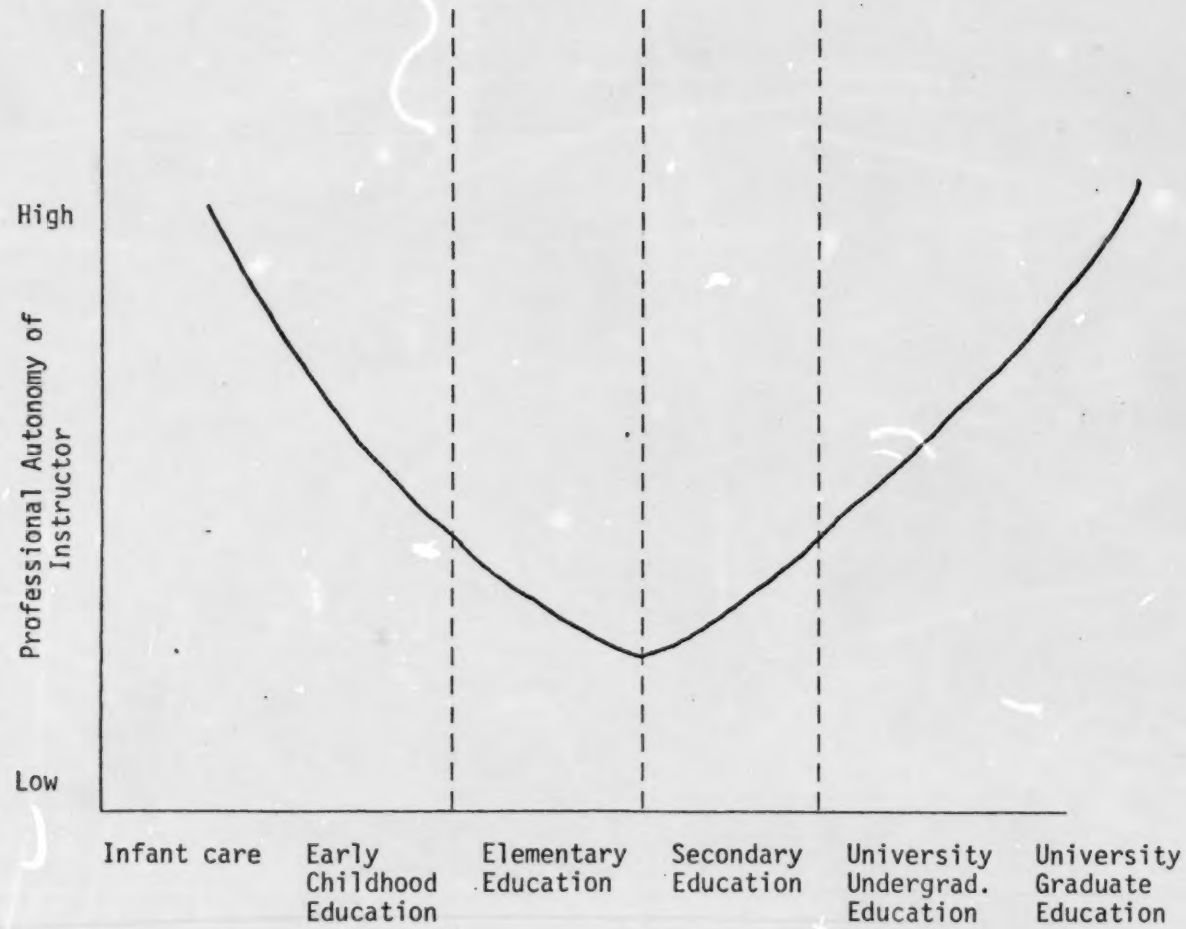
High
Low
Professional Autonomy of Instructor
Infant care
Early Childhood Education
Elementary Education
Secondary Education
University Undergrad. Education
University Graduate Education

FIGURE 1

effects on attitudes, beliefs, and behaviors are direct and reciprocal (i.e., the person is influential as well as influenced). For current purposes, the microsystem is considered to be delimited principally by the home and the work setting. The actors within the microsystem include the parents, spouses, children, and other family members within the home and the children, parents, co-workers, supervisors, and the like within the work setting.

Although the individual's microsystem context is unique, containing a range of normative and nonnormative personal and professional life events, there are dimensions which appear useful for characterizing the early childhood work environment.

Setting Structural Characteristics

Each early childhood educator's professional domain of action is differentiable on three gross characteristics: (a) the number of children for whom the individual has responsibility, (b) the amount of direct or indirect adult support the individual has, and (c) the specific characteristics of the children within the group (e.g., age, gender, developmental status, SES, and cultural background). Group size and direct adult support (in the form of caregiver/child ratio) were topics of research in the National Day Care Study (Ruopp et al., 1979). Although the results for other academic levels have generally not yielded clear conclusions, within programs for children below the age of five, both variables have been found to be related to the quality of care provided and the child outcome measures (Ruopp et al., 1979, pp. XXXVI-XXXVIII).

The notion of adult support in early childhood programs goes well beyond sheer numbers of teachers and aides within the classroom. Two other meanings seem at least as important. The first of these has to do with the extent to which teachers teach one another to teach (Fuller & Bown, 1975). This involves the provision of both practical help and moral support (Eddy, 1969) and represents a social networking arrangement.[2] This seems particularly important since (a) most center-based early childhood programs have more than one adult per classroom (Almy, 1975; Ruopp et al., 1979), (b) on-the-job supervision is central to most inservice training efforts (Peters & Kostelnik, 1981), and (c) lack of professional and adult social contact is one of the most often voiced concerns of family day care providers (Kilmer, 1979; Peters, 1972; Sale, 1973). Secondly, early childhood educators work more directly with parents than do teachers at other levels of education. Parent involvement has a long tradition within the field and has received various forms of official sanction (Peters & Koppel, 1977). The triadic relationships between parents, their children, and the early childhood program staff are often quite complex (Peters & Benn, 1980; Powell, 1977), but the data are clear that they are important (Bronfenbrenner, 1975; Fowler, 1977).

The third major structural characteristic of the early childhood educator's domain of action relates to the mix of the children served. The implications of this characteristic seem fairly obvious. It is worth noting, however, that developmental variability amongst children is great, even within a fairly narrow age span, during the early childhood years. Further, goals and curricula traditionally have <u>not</u> been

limited to "academic subject matter" areas. Early childhood personnel have historically taken responsibility for the development of the "whole" child[3]--a formidable responsibility given the heterogeneity of children found in most programs. As indicated above, changes in the exosystem are further increasing the heterogeneity, particularly within the public sector programs, and teachers have decreasing control over whom they get in their classroom.

Curriculum

Since the introduction of substantial federal money into the early childhood field in 1965, extensive efforts in program development have been undertaken. Much of this effort has been directed toward the development of curriculum models based upon current theories of development and learning (Peters, 1977). Underpinning these efforts has been a firm belief of the importance of theory to practice (Chow & Elmore, 1973; DeVries, 1974; Kohlberg, 1968; Peters, 1977). Each of the models is a representative of its own particular underlying theoretical or world view perspective. Each specifies the goals and objectives, materials and equipment, classroom arrangements, and general and specific teaching strategies consistent with the theoretical perspective of the model. Many of the model programs have received wide implementation within Head Start, Project Follow-Through, and the Handicapped Children's Early Education Program's First Chance Network. Differences between and among the programs both at the conceptual and at the classroom implementation levels have been validated (cf. Miller & Dyer, 1975; Soar & Soar, 1972; Stallings, 1975).

These curriculum variations, while an interesting development, still constitute the minority of early childhood programs. Most pro-

grams remain within the "traditional" nursery school curriculum model that has formed the basis of practice since the 1920s.

The major point is, however, that the curriculum adopted reflects the belief system of the teacher and structures the organization of the physical environment, the pattern of social interactions, and organization of activities within a classroom. It defines the learning tasks and the goals of the educational effort. Hence, it would seem particularly important for early childhood personnel to have a firm and internally consistent set of beliefs toward learning and development.

Environmental Climate

The environmental climate of the early childhood program is determined in part by the curriculum model adopted, in part by the setting structural characteristics, and in part by the personal style of the teacher (Katz, 1970). The relationship among these factors is an interactive one (McNergney & Carrier, 1981). Climate, then, refers to both the pattern and the affective character of the social interactive events within the classroom.

Summary

The early childhood educator operates within at least two microsystem environments--the home and the work setting. Three relatively stable and enduring characteristics of the work setting have been identified as the structural characteristics--including group size, adult support and heterogeneity or homogeneity of the children enrolled; the curriculum--the goals, materials, activities, and teaching strategies; and the climate--the interaction of teaching style with curriculum and structure.

RESEARCH IMPLICATIONS

The preceding analysis suggests a configuration of antecedent, transaction, and outcome variables that have potential importance for designing, implementing, and evaluating early childhood personnel preparation programs. Table 2 represents the overall configuration of these variables. A partial set of measures is found in Appendix A.

Several kinds of research questions seem most pressing within the Antecedent/Transaction Interaction framework as it is applied to in-service and continuing education programs.

Delineation of Unique Cohort Groups

Life Events Histories

It has been argued that the early childhood field has been developing, and will continue to develop, into a dual system. Of interest in this arguement is the notion of multiple cohort groups--more than two in number, each of which has a different and distinct life event history. For example, without adopting the organismic world view underlying the research (Hultsch & Plemons, 1979), it is possible to take a normative view of personal life events, as does Levinson (Levinson, 1977a, 1977b), and look at typical patterns in the life cycle. Certain personal life events occur more typically within certain age spans and have different meanings (stress vectors) within each. Without elaborating, Levinson has suggested eras of importance such as Early Adult Transition (17-18 to 22-23 years), Early Adulthood (22-23 to 30 years), the Age 30 Transition (28-33 years), Settling Down (30-33 to 39-40 years), Mid-life Transition (40's), and the like. Other approaches to the same phenomena have been suggested by Erikson (1950, 1963), Havinghurst (1952, 1972), Lovenger (1969). Given the timing

TABLE 2: Research Program Variables

Antecedents	Transactions	Outcomes
Traditional and Nontraditional Students		
Resources	**Objective**	Increased content knowledge
Biological factors	Degree of involvement in planning	Implementation of training options
General health	Degree of correspondence of training and work environment	Flexibility in employing skills
Psychological factors	Degree of learner independence	Awareness of children's needs
Literacy level		Internal consistency of beliefs
Teacher beliefs (type and internal consistency)	**Subjective**	Enhanced self-concept
Self-concept	Perceived relevance	Internal locus of control
Dogmatism	Perceived relative advantage	Openness
Locus of control		
Sociological factors		
Family background		
Structure		
Income		
Education		
Work experience		
Life Events History		
Recent teaching events history		
Years of experience		
Life events scale		
Personal data		
Age		
Marital status and history		
Children		

and entry route of traditional and nontraditional students into the field of early childhood, there are likely to be marked differences in their patterns of personal life events and their current normative "stage" of personal development.

By the same token, several researchers have studied the development of teachers over time and have identified typical developmental patterns (Fuller, 1969; Fuller & Bown, 1975). No matter where an individual is in his or her personal life cycle, he or she may be placed somewhere in a professional life era.

Danish, Smyer, & Nowak (1980) have defined structural characteristics of such placement. These include:

1. The timing and its congruence with either personal or societal expectations. Thus, being a student teacher at 22 years may be "on time" but at 35 years is "off time." Being "off time" as a college student is generally difficult as college provides a youth culture (Eiselle, 1980).

2. The duration of the event--including anticipation, the event itself, and post event influences.

3. The sequencing of an event--whether it appears in a personally or societally accepted order.

4. The cohort specificity of the event--have any other cohorts ever experienced similar events?

5. The contextual purity of the event--i.e., the extent to which an event interferes with the resolution of other life events.

6. The probability of the event's occurrence within the total population or the specific reference group (Brim & Ryff, 1980).

The current data in the early childhood field would suggest that

the dual system is likely to have personnel entering inservice training or continuing education programs who (a) differ in their life event patterns and, within each group, differ in their professional life event patterns, (b) have experienced different durations and sequences of events, and (c) have cohort-specific experiences. The educational or training experience is likely to have different meaning for each group because of (a) the difference of the probability of its occurrence within their respective reference group, (b) the differential extent to which the experience interferes with the resolution of other life events, and (c) the differential extent to which the person considers him or herself on or off time.

Though the differentiation between and among such cohort groups seems highly relevant to the design of training, little or no research into the topic is available. There has been some suggestion in the literature that considerations such as these create unique problems for the learner and may be used to suggest early exit from the profession by some workers and the later burn-out of others (Freudenberger, 1974, 1977; Fuller, 1969; Malack & Pines, 1977; VanderVen 1979), but these suggestions have not been systematically studied. Such research would seem to provide a logical first step in defining the "adult" learner.

Resources

The two groups, as entrants into the field, also are likely to differ widely on the resources they bring to the training situation. For example, nontraditional students are likely to bring a broad range of practical knowledge and some firmly fixed beliefs. They are less likely to bring a knowledge of research and theory or an appreciation

of the utility of these for practice. They may have a strong social network, but one which does not appreciate or support their current undertakings. They may have serious deficits in both academic skills and economic resources. Their very involvement in professional development activities may represent a break with and movement away from the norms of their referent group. This will affect their perceptions of what is relevant in the educational situation and what the advantages of engagement are. Further, if as suggested the psychological resource factors are themselves the focus of intervention, the full range of moral and ethical ramifications of such intervention needs to be appreciated.

Interactions with Transaction Alternatives

Although differentiating and describing different groups of adult learners represent a reasonable first step, it is necessary to determine which of the differentiating variables are indeed "relevant" to or associated with the outcomes of a training or educational effort, and under what transactional circumstances. The potential for both naturalistic, quasi experimental, and experimental designs seems very broad here. The advent of a range of training and credentialing modes in the early childhood field makes the field ripe for such research (Peters & Kostelnik, 1981). The field is literally crying out for research and evaluation efforts (Berk & Berson, 1981; Pettygrove, 1981).

CONCLUSIONS

In this paper we have taken one conceptual framework for viewing the early childhood personnel preparation field. Based in part on the life span, life events literature, and in part on the methodological approach of Aptitude/Treatment Interaction research, the Antecedent/

Transaction Interaction approach has been used to analyze the current context and recent history of the field and to draw implications for future research needs. In particular, focus has been directed toward empirical means, based upon theory, for defining what is meant by the "preschool teacher as the adult learner."

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Footnotes

[1]Although we have accepted the term "preschool teacher" in the title of this paper as it was given to us by the organizers of this symposium, we shall avoid the use of the terms "preschool" and "teacher" in the remainder of the paper. Instead, we will use the terms early childhood program and early childhood personnel or early childhood educator. Early childhood programs in many cases are schools and are operated under the auspices of public school districts or private education agencies. As such, they are not "pre" schools. The term personnel is used rather than teacher because it is felt that all adults who have continued contact with children take on the role of "teacher" but not all go by the title "teacher"; nor is "teaching" their sole responsibility (cf. Almy, 1975; Jambor, 1975; Katz, 1970; Peters & Benn, 1980).

[2]This notion was well illustrated by some very creative research reported by Arthur Blumberg and William Greenfield of Syracuse University at the 1980 annual meeting of AERA under the symposium title "Learning about work-life in the schools after school: Teachers in bars on Friday afternoon."

[3]Almy suggests that official recognition of this responsibility in the United States dates back at least to the 1930 White House Conference on Children (Almy, 1975, p. 50).